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## Tologon INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Complete if Known Application Number 10/637,108 Filing Date August 8, 2003 First Named Inventor Sandhu et al. 2824 Group Art Unit **Examiner Name** M. Lebentritt 3264.6US (92-0280.09/US) Attorney Docket Number

(use as many sheets as necessary)

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Examiner Initials *	Cite No. <sup>1</sup>	Document Number  Number - Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
m		US-4,998,151	03/05/91	Korman et al.	
M		US- 5,242,860	09/07/93	Nulman et al.	
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Examiner	Cite	Foreign Patent Document		Name of Patentee or	Pages, Columns, Lines,	
Initials*	No.1	Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
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<sup>&</sup>lt;sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at <u>www.uspto.gov</u> or MPEP 901.04. that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Skind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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			CLOSURE	Filing Date	August 8, 2003
STAT	EMENT I	BY AP.	PLICANT	First Named Inventor	Sandhu et al.
				Group Art Unit	2824
	(use as many sh	eets as nec	cessary)	Examiner Name	M. Lebentritt
Sheet	2	of	2	Attorney Docket Number	3264 6US (92-0280 09/US)

	,	OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS	<del></del>
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
M		EIZENBERG et al., "TiCN: A new chemical vapor deposited contact barrier metallization for submicron devices", Appl. Phys. Lett. 65 (19), 7 November 1994, pps. 2416-2418.	
ML		Peng et al., "Properties of CVD-W Overgrowth on PVD and MOCVD TiN Layers, IEEE, 5 <sup>th</sup> International Converence Proceeding on Solid-State and Integrated Circuit Technology, 1998, pps. 211-214.	
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Substitute for form 1449A/PTO Complete if Known 10/637,108 Application Number INFORMATION DISCLOSURE Filing Date August 8, 2003 STATEMENT BY APPLICANT First Named Inventor Sandhu et al. Unknown Group Art Unit (use as many sheets as necessary) Examiner Name Unknown 3264 6US (92-0280 09/US) Attorney Docket Number

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T 2
M		KATZ et al., "Properties of Titanium Nitride Thin Films Deposited by Rapid-Thermal-Low-Pressure-Metalorganic-Chemical-Vapor-Deposition Technique Using Tetrakis (Dimethylamido) Titanium Precursor", J. Appl. Phys. 70(7), October 1991, pps. 3666-3677.	
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<sup>&</sup>lt;sup>1</sup> Unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Sheet 1 of 2

Application Number Docket Number (Optional) Form PTO-1449 3264.6US (92-0280.09/US) Not yet assign d INFORMATION DISCLOSURE CITATION Applicant Sandhu et al. IN AN APPLICATION (Use several sheets if necessary) Filing Date August 8, 2003 Group Art Unit Unkn wn **U.S. PATENT DOCUMENTS** FILING DATE **EXAMINER** CLASS SUBCLASS DOCUMENT NUMBER DATE NAME INITIAL IF APPROPRIATE 01/1972 Wakefield et al. 3,637,320 3,807,008 04/1974 Reedy 4,035,541 07/1977 Smith et al. 4,497,874 02/1985 Hale 4,830,886 05/1989 Co et al. 4,960,732 10/1990 Dixit et al. 4,990,997 02/1991 Nishida 5,001,531 01/1001 Yamaguchi 5,049,975 09/1991 Ajika et al. 5,087,593 02/1992 Narula 5.132.756 01/1992 Matsuda FOREIGN PATENT DOCUMENTS Translation DOCUMENT NUMBER DATE COUNTRY CLASS SUBCLASS YES NO 4-87328 06/1992 Japan 02/1992 4-38875 Japan **OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.) Wakefield et al., "Preparation of Titanium Carbonitride From Mono-, Di-, and Tri-Methyl Amines"; 4th International Conference on CVD, Electrochemical Society, 1973, pps. 173-150. Politis et al., "Preparation, Characterization and Superconducting Properties of TiN and TiCxNy Single Crystals Prepared By CVD"; 7th International Conference on CVD, Electrochemical Society, 1979, pps. 289-299. Raaijmakers et al., "Contact Hole Fill with Low Temperature LPCVD TiN", VMIC Conference 6/12-6/13/90, pps. 219-225. **EXAMINER** DATE CONSIDERED EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conforman not considered. Include copy of this form with next communication to the applicant.

Sheet 2 of 2

## Docket Number (Optional) Application Number Form PTO-1449 3264.6US (92-0280.09/US) Not yet assign\_d INFORMATION DISCLOSURE CITATION Applicant Sandhu et al. IN AN APPLICATION (Use several sheets if necessary) Filing Date August 8, 2003 Group Art Unit Unknown **U.S. PATENT DOCUMENTS EXAMINER** FILING DATE IF APPROPRIATE CLASS SUBCLASS DOCUMENT NUMBER DATE NAME INITIAL 08/1992 Gordon et al. 5,139,825 Gordon et al. 5,178,911 01/1993 Sandhu 5,192,589 03/1993 09/1993 Sandhu et al. 5,246,881 01/1995 Westmoreland 5,384,289 5,496,762 03/1996 Sandhu et al. 5,536,947 07/1996 Klersy et al. 5,571,572 11/1996 Sandhu 5,723,382 03/1998 Sandhu et al. 04/1999 5,893,758 Sandhu et al, 6,081,034 06/2000 Sandhu gt a 09/2001 Sandhu et al 6.291.340 FOREIGN PATENT DOCUMENTS Translation DATE COUNTRY CLASS SUBCLASS DOCUMENTNUMBER YES NO **OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.) **EXAMINER** DATE CONSIDERED EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conforman not considered. Include copy of this form with next communication to the applicant.

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